

CLAIM AMENDMENTS

1. (CURRENTLY AMENDED) A method for determination of and compensation for the scale factor error caused by changes in the wavelength of ~~in~~ a multiple axis fiber-optic gyroscope (FOG) which is fed from a common light source, in a GPS-supported inertial track and attitude reference system there ~~which~~ is equipped with a Kalman correction wherein ~~filter~~, characterized ~~in that~~ the scale factor error determined for an ~~one~~ axis with comparatively ~~relatively~~ fast motion dynamics is used as the Kalman filter correction value for the scale factor error correction for all of the measurement axes of the FOGs fiber optic gyro with slower ~~motion~~ dynamics, with the error correction being carried out with a time constant which is long in comparison to expected short-term error sources which cannot be modulated or compensated for.

2. (CURRENTLY AMENDED) The method as claimed in Claim 1 for a three-axis track and attitude reference system, wherein ~~characterized in that~~ the scale factor error determined for the vertical axis (z) is used for ~~scale factor error correction~~, for error compensation for the other measurement axes (x, y) for scale factor error correction.

3. (CANCELED) The method as claimed in Claim 1 or 2, characterized in that the error correction to be implemented with the aid of the scale factor determined for the axis with comparatively fast motion dynamics is used with a time constant which is long in comparison to expected short-term error sources which cannot be modulated or compensated for.